

Capitalism and Extinction
Ashley Dawson

Unpin that spangled breastplate which you wear,
That th'eyes of busy fools may be stopped there.
Unlace yourself, for that harmonious chime,
Tells me from you, that now it is bed time...
Licence my roving hands, and let them go,
Before, behind, between, above, below.
O my America! my new-found-land,
My kingdom, safeliest when with one man mann'd,
My Mine of precious stones, My Empirie,
How blest am I in this discovering thee!
To enter in these bonds, is to be free;
Then where my hand is set, my seal shall be.

-John Donne, "To His Mistress Going To Bed" (1654)

In the first of his accounts of his voyages to the New World, Christopher Columbus describes the island he named Española as an Edenic land whose "mountains and plains, and meadows, and fields, are so beautiful and rich for planting and sowing, and rearing cattle of all kinds, and for building towns and villages."¹ Greed and lust for power drip from Columbus's pen as he describes a marvelous land of abundant harbors and many rivers, "most of them bearing gold," populated by naïvely generous inhabitants "so liberal of all they have that no one would believe it who had not seen it." For Columbus, the biodiversity of this new world is equally notable, for, as he notes the islands are "covered with trees of a thousand kinds of such great height that they seemed to reach the skies," trees in which "the nightingale was singing as well as other birds of a thousand different kinds."² Columbus's breathless description of the material riches to be found in the "New World" set the tone for the European imperial expansion in the subsequent five centuries. As John Donne's sonnet to his mistress suggests, the lust for this imagined natural bounty was so strong that it permeated all aspects of European life, permeating even the erotic fantasies of poets such as Donne. The flora and fauna of newly "discovered"

lands appeared to Europeans to be an apparently boundless store of natural wealth, free for the taking. Today we confront the baleful legacy of this feckless appropriation and dissipation of the global environmental commons.

If, in other words, human beings have engaged in notable forms of ecocide throughout our history, it is only with the expansion of Europe and the development of modern capitalism that ecocide has taken on a truly global extent and planet-consuming destructiveness. As Europeans subjugated and colonized “virgin” lands, they dramatically augmented processes of environmental degradation and extinction. The expansion of capitalist social relations through European colonialism and imperialism pushed what had previously been regional environmental catastrophes to a planetary scale. In addition, by transforming nature into a commodity that could be bought and sold, capitalist society shifted humanity’s relations with nature into a mode of intense ecological exploitation unimaginable in previous epochs. Capitalism is not necessarily more immoral than previous social systems with regard to cruelty to humans and the gratuitous destruction of nature. As a mode of production and a social system, however, capitalism *requires* people to be destructive of the environment. Three destructive aspects of the capitalist system stand out when we view this system in relation to the extinction crisis: 1) capitalism tends to degrade the conditions of its own production; 2) it must expand ceaselessly in order to survive; 3) it generates a chaotic world system, which in turn intensifies the extinction crisis.³ By wrenching specific elements out of the complex ecosystems in which they are intertwined and turning them into commodities, that is, capital remorselessly breaks down the complex natural world into impoverished but exchangeable forms, simultaneously discarding all those elements that don’t appear to have immediate exchange value. In addition, as Marx argued in the *Grundrisse*, “capital is the endless and limitless drive to go beyond its limiting barrier.”⁴ This

argument is quite clear on an intuitive level: any corporation that doesn't outcompete its rivals will be driven out of business in short order. Finally, as the era of globalization demonstrates, capitalism creates a turbulent world in which "all that is solid melts into air," as established modes of governance and all other social forms are torn apart by a gale of "creative destruction." While many commentators have highlighted these dynamics of capitalism previously, they are particularly starkly evident when seen through the lens of extinction. These three key ecological contradictions of capitalism are interwoven in practice, but their particular dynamics are more evident when they are considered in isolation, as I do in the following sections. The examples discussed in these sections span the capitalist epoch, from the earliest years of merchant capitalism to contemporary forms of neoliberal globalization. Yet if these examples suggest that the ecological contradictions of capital are endemic, they also underline the remorselessly intensifying character of capital's death-dealing reign.

-Capitalism's Degradation of the Environment

The tendency for capitalism to degrade the conditions of its own production is shockingly evident in the fur trade, one of the main forces that drove European expansion after 1500. Aside from keeping wearers warm, fur clothes were status symbols in early modern Europe. The right to wear fur was tightly controlled by so-called sumptuary laws, which dictated that only people of certain social rank were allowed to don luxurious clothes. Nevertheless, as the mercantile bourgeoisie grew, the demand for furs spiraled. Western Europe quickly destroyed most of its fur-bearing mammals, and Russia began its long expansion eastward into Siberia, where it collected furs as tribute from conquered peoples such as the Tatars. By the sixteenth century, furs were the Russian state's largest source of income. Siberian beavers, sables, and martens were

driven to the edge of extinction within two centuries.⁵ The insatiable demand for fur consequently became one of the primary catalysts for European colonization of the Americas. Indeed, the French, Dutch, and English development companies established to facilitate European colonization of North America quickly realized that furs offered one of the most convenient means for the colonists to remit value back to Europe. Furs made fortunes for many European traders, who exchanged common and relatively cheap manufactured items such as iron axe heads with Native Americans for valuable beaver, deer, ermine, and other pelts.

Over time, the Native American tribes caught up in the fur trade gradually abandoned their subsistence ways of life, becoming integrated into the emerging capitalist world system as specialized laborers in the putting-out system of fur hunting.⁶ In addition to transforming indigenous subsistence culture, the fur trade catalyzed bloody conflicts between Native American tribes, including the so-called Beaver Wars of the mid-17th century, in which the Dutch- and English-backed Iroquois Confederation battled the predominantly Algonquin-speaking tribes of the Great Lakes region, whom the French supported. As beaver populations declined in places such as the Hudson Valley due to over-hunting, tribes like the Mohawks clashed with their neighbors to the north and west, where fur-bearing animals had not yet been hunted to the brink of extinction. The full human impact of these wars is still largely unknown since they took place beyond the frontier of European colonization, but they undoubtedly weakened the Native American tribes of the Northeast, making them more vulnerable to subsequent settler colonial campaigns of expropriation and extermination. In addition, such inter-imperial competition between the French and English led to higher prices for pelts, which increased the incentive for unsustainable over-harvesting of furs by European trappers and Native Americans. The fur trade continued until after the American Revolution, helping to make

John Jacob Astor, owner of the monopolistic American Fur Company, into the US's first multi-millionaire. But Astor, having played a prominent role in decimating the continent's fur-bearing animals, abandoned the trade for speculation in real estate early in the nineteenth century.

Although the beaver did not become extinct, its numbers were so reduced that it was no longer viable to hunt commercially. Scarcely two hundred years had passed since King Henry IV of France had granted the first charter to a European fur trading company in North America.

As Europe subjugated other parts of the planet, it dramatically transformed, and in most cases radically diminished, biodiversity of all kinds. In some cases, this was unconscious. The expansion of Europe into the Americas took the form of a great wave of novel biota, from smallpox and influenza viruses to pigs and horses.⁷ Traveling alongside the European conquerors, these invasive species often wreaked havoc in the New World, killing many millions of Native Americans who had not been exposed to the new germs and transforming the landscape wholesale. In many cases, however, the Europeans also consciously obliterated biodiversity for their own selfish economic ends. For example, consider the plantation system. The immense diversity of the tropical and semi-tropical lands settled by the Portuguese and Spanish, early implementers of the plantation economy, was dramatically remade as land was turned over to grow a single crop such as sugar. As territories were subjugated and incorporated into European empires and the nascent capitalist system, indigenous agricultural practices that were adapted to the local climate, and consequently highly diverse and resilient, were extirpated. Such well-adapted agricultural practices were replaced by cash crops grown for export to the imperial metropole. Indigenous people were displaced and slaves were imported to work the land, generating a brutal system of hitherto unequalled exploitation based on invented notions of racial difference. In addition to displacing and killing many millions of people, the monocultures

of the plantation economy quickly exhausted the land in the colonies, destroying soil fertility, and increasing vulnerability to pests.

By the late eighteenth century, plantation owners in the Caribbean islands had begun to worry about environmental degradation and climate change, which at the time was known as desiccation.⁸ As a result of deforestation linked to plantations, rain had ceased to fall on some of these islands. Mounting concern over the deteriorating environment led to the passage of the first conservation legislation, which set aside forest land in a forerunner of national park systems.⁹ As plantation owners depleted the land, inter-imperial rivalry surged, with European colonial powers vying to capture islands whose fertility had not yet been depleted. The British abolition of slavery in 1833 can, in fact, be seen as a reaction to the declining productivity of its Caribbean plantations, rather than as an act of selfless humanitarianism.¹⁰ Despite mounting awareness of the destructive social and environmental impact of the plantation system, however, the European powers continued to establish plantations around the world, with extensive tea, rice, and rubber plantations that opened in Asia and Africa well into the twentieth century. The Green Revolution of the second half of the twentieth century continued this trend towards displacement of small peasant agriculture by large landholdings devoted to export agriculture, with fossil fuel-based fertilizers and pesticides used to cope with the resulting environmental stresses and contradictions.¹¹

As Europeans colonized other parts of the world, they took cultural beliefs with them that legitimated their conquests. These ideologies of domination, intended to justify European expropriation of indigenous people and their land, also established an exploitative attitude towards flora and fauna in the colonies. The English philosopher John Locke, for example, argued that God intended the land to belong to those who were “industrious and rational.” These

attributes were manifested in Europeans' "improvement" of the land through their labor, development work that, he argued, removed the land from its original communal state and made it the property of the Europeans. As Locke remarked, "He that in obedience to this command of God, subdued, tilled and sowed any part of [the land], thereby annexed to it something that was his property, which another had no title to..."¹² In other words, since indigenous people weren't using the land properly, it didn't really belong to them and they could be dispossessed with no problem. Not coincidentally, Locke owned plantations in English colonies in Ireland and Virginia.¹³

While part of the "improvement" that Locke envisaged was to come through the form of privatization known as enclosure, such development was also to take place through the application of modern science. As it was conceptualized by Francis Bacon and his followers in the seventeenth century, the scientific method involved interventions in a natural world represented as a female body, a body that had to be "twisted on the rack" and "tortured by fire" before it would reveal its secrets.¹⁴ In many ways, Bacon and his acolytes were simply expanding on the Judeo-Christian tradition; after all, it is Adam whom God allows to name not just the animals in "Genesis," thereby establishing his dominion over the natural world, but also Eve. But Bacon's representation of the forceful subjugation of a feminized nature also reflects a process of subjugation unfolding at the time he wrote: the violent acts of enclosure through which women, accused of being witches and often burnt at the stake, were deprived of control of their reproductive power in the early modern period.¹⁵ This subjugation mirrored the equally savage measures through which the European peasantry was expelled from the land they once held communally, as well as the bottomless depravity of colonialism and racial slavery, processes of expropriation, as Marx put it, "written in the annals of mankind in letters of blood and fire." As

Bacon's account of scientific inquisition suggests, the scientific method took this reign of terror as one of its core metaphors, generating a model of patriarchal mastery over a passive feminized nature that set the terms for subsequent notions of progress through domination of the natural world. Doctrines of the objectivity and disinterestedness of the scientific method helped to obscure the potentially ecocidal, patriarchal, and racist character of techno-science, until the social movements of the late twentieth century arose to challenge science's role in legitimating colonialism, in depriving women of control of their bodies, and in creating deadly chemicals such as DDT.¹⁶

-Capitalism's Ceaseless Expansion

Capitalism is dependent on the conditions of production that it relentlessly degrades. By fecklessly consuming the environment, capital is literally sawing off the tree branch it is sitting on. But it does so because it must: it is a system based on ceaseless accumulation. Capitalists must constantly reinvest their accumulated profits if they are to survive against competitors, driving capital to expand at a compound rate.¹⁷ Every limit to capital's expansion appears as an obstacle that it strives to overcome and fold into a new round of accumulation. But we live on a planet that is self-evidently finite. Capital's logic is consequently that of a cancer cell, growing uncontrollably until it destroys the body that hosts it.

The whaling industry is perhaps the best instance of this all-consuming drive to expand accumulation. Whales have endured the most prolonged and vicious attack by humans of any single species of animal.¹⁸ Prior to the rise of capitalism, whales were hunted in sustainable numbers by indigenous communities such as the Inuit in the Arctic, and by coastal-dwelling peoples such as the Basques, who intercepted immense but timid Bowhead and right whales as

they made their annual migratory trek through the Bay of Biscay.¹⁹ The Inuit and Basques killed whales in relatively limited numbers. But, as the industrial revolution took off, whales provided valuable commodities, including oil used for illumination and to grease machinery in the factories of the period. As a consequence, the growing markets of early modern capitalism exhausted stocks of coastal whales, and by the late seventeenth century whalers had to take to the open ocean in search of prey.²⁰ Maritime powers of the time such as the Dutch articulated a doctrine of freedom of the seas for their whaling fleets, opening the rich fisheries of the North Atlantic to commercial whaling by the competing European powers of the day.²¹

No efforts were made by the Europeans and their North American competitors to conserve stocks of whales. Instead, whalers acted as if their quarry was inexhaustible. Competition led to increasingly sophisticated techniques of slaughter, from the faster sailing ships of the late eighteenth century that hunted right whales to near extinction in several decades, to the invention in the mid-nineteenth century of the explosive harpoon gun and huge steam-powered factory ships, which allowed whalers to hunt faster fin and sperm whales in devastating numbers.²² Although it was clearly in the industry's interest to limit the accelerating predation, the competitive dynamic of industrial capitalism made such forms of conservation impossible. Instead, whalers came up with far-fetched arguments to justify their monumentally shortsighted plunder of the oceans. For instance, in a chapter of *Moby Dick* entitled "Does the Whale's Magnitude Diminish? Will He Perish?" Melville's protagonist Ishmael ponders the question of the whale's extinction. Although he admits that whales were once far more easy to find in the oceans, he concludes that this is because whales now travel in bigger but less numerous groups, and that they have moved to the Poles in order to escape the whaling industry. As Ishmael's torturous reasoning suggests, whale populations had to be represented as limitless in order to

justify the unsustainable competition of the industry. By the early twentieth century, humans had emptied the world's oceans of so many whales that commercial whaling was no longer a viable major industry.²³

The decimation of whales and the crash of the whaling industry also illustrate the folly of the economic doctrines that grew up to legitimate capitalism. Adam Smith's *Wealth of Nations* (1776) is the clearest formulation of these doctrines. Smith believed that self-interested competition in the free market would generate beneficial outcomes for all by keeping prices low and creating incentives for a variety of goods and services. As Smith put it, "by pursuing his own interest [the individual] frequently promotes that of the society more effectually than when he really intends to promote it."²⁴ Private vices were purportedly transmuted into public virtues through the operation of what Smith described as the "invisible hand" of the market. Like many of his contemporaries, Smith believed in the inevitability of progress, which he assumed involved the production of greater material wealth. Yet, Smith's invisible hand completely ignored the issue of depletion and even extinction of such natural "resources" as fur-bearing animals and whales. In fact, classical economics is blithely ignorant of the impact of turning the earth's resources into capital, focusing only on the secondary problem of the distribution of resources between different competing ends.²⁵ But the earth's resources are not just scarce. They are finite. Like the whaling industry, classical economics is constitutively blind to this finitude, and consequently encourages both producers and consumers to use up resources as fast as possible in pursuit of greater profits and growth. Mainstream economics as formulated by Adam Smith and as practiced today celebrates values - selfishness, gluttony, competitiveness, and shortsightedness - that were once viewed as cardinal sins, and in the process provides intellectual justification for capitalism's disastrous pillage of the planet.

-Capitalism's Chaotic World

If capitalism is based on the illusory hope that a mysterious invisible hand will reconcile ruthlessly self-interested competition with the common good, modern capitalist society is correspondingly organized around antagonistic nation-states whose competing interests, it is vainly hoped, will be attuned through various international forums. Yet, wracked by the periodic crises of over-accumulation that are a structural feature of capitalism, the bourgeoisie is impelled to seek markets abroad. Since their peers in other nations are driven to cope with system-wide crises through similar expansionary policies, the result is increasing inter-imperial competition and endemic warfare.²⁶ Capitalism thus generates a chaotic world system that compounds ecological crises.

In some cases, ecocide is a conscious strategy of imperialism, generating what might be termed ecological warfare. For example, the destruction of the great herds of bison that roamed the Great Plains of North America was a calculated military strategy designed to deprive Native Americans of the environmental resources on which they depended.²⁷ When Europeans first arrived, the plains were inhabited by tens of millions of bison, providing indigenous peoples with resources that allowed them to maintain their autonomous, nomadic lifestyle. Commercial hunting of bison began in the 1830s, soon reaching a toll of two million animals a year.²⁸ By 1891, there were less than 1,000 bison left on the continent, and the Native Americans had been crushed, defeated militarily, and forced onto a series of isolated, barren reservations. Many of these reservations were subsequently turned into “national sacrifice zones” during the Cold War, when nuclear weapons were exploded in sites such as Nevada in order to perfect the US’s military arsenal.²⁹ Similar ecological violence was meted out by the US military to other parts of

the planet. During the Vietnam War, for instance, nearly twenty million gallons of pesticides were sprayed on the tropical forests of Vietnam in an effort to destroy the ecological base of the revolutionary Vietnamese forces. This virulent campaign of ecological warfare eventually generated a revolt among US scientists, who balked at what they called the systematic ecocide being carried out by the military in Vietnam.³⁰ Despite this history of war resistance, the US military, with its more than 700 bases worldwide, remains the single most polluting organization on the planet.³¹

In many cases, however, animals and plants simply suffer as collateral damage in the inter-imperial rivalries generated by capitalism. In a system of competing capitalist nations, no individual state has the power or responsibility to counteract the system's tendencies toward ecological degradation. Indeed, inter-imperial competition impels individual states to shirk responsibility, seeking to score points by blaming their competitors for failing to address the environmental crisis. This fatal contradiction of capitalist society has been abundantly evident in the rounds of United Nations-sponsored climate negotiations during the last two decades. During these negotiations, advanced industrialized countries such as the United States and Great Britain have refused to reduce their greenhouse gas emissions significantly until developing nations such as China, India, and Brazil offer to cut their emissions as well. The industrializing nations respond by pointing out that their per capita emissions are still far lower than those of the wealthy nations of Europe and North America, and argue that these countries have benefited from two hundred years of industrial growth, effectively colonizing the atmosphere to the exclusion of formerly colonized nations. As a result of these antagonistic positions, no binding international agreement on emissions reductions has been reached, despite years of desperate pleas from scientists and civil society. It is not simply that the climate and extinction crises have

arrived at a uniquely unpropitious moment when neoliberal doctrines of financial deregulation, corporate power, and emaciated governance are hegemonic.³² Rather, the deadlocked climate negotiations are a reflection of the fundamentally irrational, chaotic, violence-ridden, and ecocidal world system produced by capitalism.

Can capitalist society reform itself sufficiently to cope with the extinction crisis? This is not simply unlikely. It is impossible in the long run. While it is true that the environmental movement did manage to push corporations and the state into cleaning up local crises from the late 1960s onwards, climate change and extinction suggest that the capitalist system is destroying its ecological foundations when viewed on a longer temporal scale. Recall that capital's solution to periodic systemic crises is to initiate a new round of accumulation. Capital essentially tries to grow itself out of its problems. But, as we have seen, the extinction crisis is precisely a product of unchecked, blinkered growth. In such a context, conservation efforts can never be more than a paltry bandage over a gaping wound. As laudable as they are, conservation efforts largely fail to address the deep inequalities that capitalism generates, which push the poor to engage in deforestation and other forms of over-exploitation. Many of today's major conservation organizations were established in the last half of the twentieth century: the Nature Conservancy (1951), World Wildlife Fund (1961), Natural Resources Defense Council (1970), and Conservation International (1987). Yet during this same period, a new round of accumulation based on neoliberal principles of unrestrained hyper-capitalism has engulfed the planet. The neoliberal era has seen much of the global South become increasingly indebted, leading international agencies such as the World Bank to force debtor nations to harvest more trees, mine more minerals, drill for more oil, and generally deplete their natural resources at exponentially

greater rates. The result has been a steeply intensifying deterioration in global ecosystems, including a massive increase in the rate of extinction.³³

Despite this dramatic collapse of global ecosystems, the climate change crisis has unleashed a fresh round of accumulation, obscured by upbeat language about the investment opportunities opened up by the green economy. Neoliberal solutions to the climate crisis such as voluntary carbon offsets are not only failing to diminish carbon emissions, but are also dramatically augmenting the enclosure and destruction of the global environmental commons.³⁴ Such programs allow polluting industries in wealthy nations to continue emitting carbon, while turning the forests and agricultural land of indigenous people and peasants in the global South into carbon dioxide “sinks” or biodiversity “banks.” Under the green economy, vast numbers of people, plants, and animals are being sacrificed as collateral damage in the ecocidal exploitation of the planet. Capitalism, it is clear, cannot solve the environmental crises it is causing.

Endnotes

- ¹ Christopher Columbus, *Select Letters of Christopher Columbus*, R.S. Major, trans and ed. (London: Hakluyt Society, 1870), 5.
- ² Columbus, 4.
- ³ Joel Kovel, *The Enemy of Nature: The End of Capitalism or the End of the World* (New York: Zed, 2007), 38.
- ⁴ Quoted in Kovel, 41.
- ⁵ Ponting, 179.
- ⁶ Broswimmer, 63.
- ⁷ Alfred Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (New York: Praeger, 2003).
- ⁸ Richard Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens, and the Origins of Environmentalism, 1600-1860* (New York: Cambridge University Press, 1996).
- ⁹ Richard Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens, and the Origins of Environmentalism, 1600-1860* (New York: Cambridge University Press, 1996).
- ¹⁰ Eric Williams, *Capitalism and Slavery* (Charlotte, NC: University of North Carolina Press, 1994).
- ¹¹ Vandana Shiva, *The Violence of the Green Revolution: Third World Agriculture, Ecology, and Politics* (New York: Zed Books, 1992).
- ¹² John Locke, *Second Treatise on Government*, Chapter 5: Of Property, <http://www.constitution.org/jl/2ndtr05.htm>
- ¹³ Barbara Arneil, *John Locke and America: The Defense of English Colonialism* (New York: Oxford University Press, 1996).
- ¹⁴ Carolyn Merchant, *The Death of Nature: Women, Ecology, and the Scientific Revolution* (New York: HarperOne, 1990).
- ¹⁵ Silvia Federici, *Caliban and the Witch: Women, the Body, and Primitive Accumulation* (New York: Autonomedia, 2004), 65.
- ¹⁶ Vandana Shiva and Ingunn Moser, eds., *Biopolitics: A Feminist and Ecological Reader on Biotechnology* (Atlantic Highlands, NJ: Zed, 1995).
- ¹⁷ David Harvey, *The Enigma of Capital* (New York: Oxford University Press, 2010), 217.
- ¹⁸ Ponting, 186.
- ¹⁹ John F. Richards, *The World Hunt: An Environmental History of the Commodification of Animals* (Berkeley, CA: University of California Press, 2014), 112.
- ²⁰ Richards, 134.
- ²¹ Richards, 131.
- ²² Broswimmer, 68.
- ²³ Broswimmer, 68.
- ²⁴ Adam Smith, *The Wealth of Nations*
- ²⁵ Ponting, 155.
- ²⁶ For a discussion of the economic and political mechanisms that generate imperialism, see David Harvey, *The New Imperialism* (New York: Oxford University Press, 2003).
- ²⁷ Roxanne Dunbar-Ortiz, *An Indigenous People's History of the United States* (New York: Beacon, 2014).
- ²⁸ Broswimmer, 65.

- ²⁹ Rebecca Solnit, *Savage Dreams: A Journey in the Hidden Wars of the American West* (San Francisco: Sierra Club, 1994).
- ³⁰ David Zierler, *The Invention of Ecocide: Agent Orange, Vietnam, and the Scientists Who Changed the Way We Think About the Environment* (Athens, GA: University of Georgia Press, 2001).
- ³¹ Barry Sanders, *The Green Zone: The Environmental Costs of Militarism* (Oakland, CA: AK Press, 2009).
- ³² Naomi Klein, *This Changes Everything: Capitalism vs. The Climate* (New York: Simon and Schuster, 2014).
- ³³ Damian Carrington, “Earth Has Lost Half Its Wildlife in the Past Forty Years, WWF Says,” *The Guardian* (30 September 2014), <http://www.theguardian.com/environment/2014/sep/29/earth-lost-50-wildlife-in-40-years-wwf>
- ³⁴ Adrian Parr, *The Wrath of Capital: Neoliberalism and Climate Change Politics* (Columbia University Press, 2014).